REMARKS

This Amendment is in response to the Office Action mailed August 31, 2005. In the Office Action, claims 17-20, 22-23, 25-32 and 35 were rejected under 35 U.S.C. §103(a). Applicant respectfully traverses the rejection in its entirety. Reconsider and allowance of the pending claims is respectfully requested. For clarity sake, Applicant shall address the grounds for rejection associated with independent claims 17, 25 and 31. Applicant reserves the right to address the grounds for rejection for each and every dependent claim at a later time since the traversal of the rejection applies to all pending claims.

Rejections Under 35 U.S.C. § 103

Claims 17-20, 22-23, 25-32 and 35 were rejected under 35 U.S.C. §103(a) as being unpatentable over Holden (U.S. Patent No. 6,771,639) in view of Reynolds (U.S. Publication No. 2001/0037500 A1). Applicant respectfully traverses the rejection because a *prima facie* case of obviousness has not been established.

As the Examiner is aware, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. *See MPEP §2143; see also In Re Fine, 873 F. 2d 1071, 5 U.S.P.Q.2D 1596 (Fed. Cir. 1988).*

Applicant respectfully points out that Reynolds (U.S. Published Patent Application No. 2001/0037500 A1) has a filing date of March 27, 2001, which is subsequent to the filing date of the subject application (September 29, 2000). It is acknowledged that Reynolds has an effective filing date of March 31, 2000 based on priority from a number of U.S. Provisional Patent Application No. 60/193,470 filed on that day. However, Applicant respectfully traverses the rejection because the cited rejections are based on broad, general passages at paragraphs [003-005] and paragraphs [012-014] of Reynolds. It is respectfully submitted that paragraphs [003-005] and paragraphs [012-014] of Reynolds were fully disclosed in U.S. Provisional Patent

Application No. 60/193,470. A copy of U.S. Provisional Patent Application No. 60/193,470 is enclosed herewith as Exhibit A.

Therefore, in order to facilitate prosecution of the subject application, Applicant respectfully requests that the Examiner to specifically recite what exact elements and/or passages in Reynolds teach or suggest each and every limitation set forth in the claims.

With respect to independent claims 17, 25 and 31, Applicant respectfully agrees that Holden does not show an announcement that comprises "a parameter to identify a network address and port number of a location in the memory containing metadata." *See Page 3 of the Office Action.* However, Applicant respectfully traverses the allegation that Reynolds teaches the exact same technique as television enhancement with announcements including known multicast address and port number for available meta data within the network for the receiver to receive. *See Page 3 of the Office Action.*

First, Reynolds does not constitute prior art because, based on our brief review, the undersigned attorney has been unable to locate any disclosure of the contents within paragraphs [013-014] of Reynolds within U.S. Provisional Patent Application No. 60/193,470. Therefore, Applicant respectfully submits that the contents paragraphs [012-014] of Reynolds, relied upon by the Examiner, does not constitute prior art unless it is determined, and evidence is offered, that such contents are fully disclosed in U.S. Provisional Patent Application No. 60/193,470.

Hence, Applicant respectfully submits that the contents set forth in paragraphs [013-014] of Reynolds constitute new matter because such discussion has not been located within U.S. Provisional Patent Application No. 60/193,470. Applicant respectfully requests the Examiner to recite where such discussion can be located. Otherwise, Applicant respectfully requests that the Examiner withdraw the rejection of claim 17, 25 and 31 under 35 U.S.C. §103(a) as well as those claims dependent thereon.

Second, even if pertinent information within Reynolds is considered to constitute prior art, the combined teachings of Holden and Reynolds fail to describe or suggest all the claim limitations. More specifically, it is alleged that FIG.3, column 5, lines 7-57 and column 6, line

54 to column 7, line 10 of Holden teach "the source transmitter or the first SIP transmits data information including an announcement or invitation including metadata information to the other SIP receiver. *See Page 3 of the Office Action.* Applicant respectfully traverses the rejection.

Holden teaches an announcement includes "*media* data," such as audio data, video data, image data, markup data, or text data. *Emphasis added; See Column 5, lines 20-37 of Holden.* Holden does not teach or suggest that the announcement comprises a parameter or attribute that identifies "a network address and port number of a location in the memory containing *metadata.*" *Emphasis added.* On page 4, lines 20 of the subject application, "metadata" is defined as data that describes other data, which is not equivalent to the media data contained in the announcements of Holden. Similarly, Reynolds describes that announcements have an address to support multicast address or a port (see Page 5 of U.S. Provisional Patent Application No. 60/193,470), but does not describe or suggest a parameter or attribute that identifies a network address and port number of a location in the memory containing metadata as set forth in independent claims 17, 25 and 31.

Therefore, withdrawal of the §103(a) rejection as applied to independent claims 17, 25 and 31 and those claims dependent thereon is respectfully requested.

Conclusion

Applicant respectfully requests examination of the pending claims at the Examiner's earliest convenience.

Respectfully submitted,

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Susan McFarlane 11/30/05

Susan McFarlane *Date*

Exhibit A

Attorney Docket No: INTC-001/00US

PATENT

U.S. PATENT AND TRADEMARK OFFICE

PROVISIONAL APPLICATION COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION under 37 CFR 1.53 (b)(2).	Docket Number	INTC-001/00US	Type a plus sign (+) inside this box→	+

INVENTOR(s)/APPLICANT(s)

LAST NAME	FIRST NAME	MIDDLE INITIAL	RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY)
Reynolds	Steve		
Lemmons	Tom		
Zenoni	Ian		
Hassell	Joel		
Huber	Tom		

TITLE OF INVENTION

System And Method For Local Meta Data Insertion

CORRESPONDENCE ADDRESS

Cooley Godward LLP
Customer No. 022903

STATE	ZIP CODE	COUNTRY

ENCLOSED APPLICATION PARTS (check all that apply)

[X] Specification Number of Pages [Eleven (11)] [ ] Small Entity Statement

[X] Drawing(s) Number of Sheets [Two(2)]

[X] Other (specify)

Enhanced Content Specification Document entitled: *Advanced Television Enhancement Forum (ATVEF)* (38 pages)

(Two (2)) Return Post Cards

METHOD OF PAYMENT (check one)

[X]	No Fee is Enclosed	PROVISIONAL FILING FEE AMOUNT ($)
[ ]	Check or money order is enclosed to cover the Provisional filing fees.	$150.00
[ ]	The Commissioner is hereby authorized to charge filing fees or credit Deposit Account Number: 03-3117	

The Invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

[x] No.

[ ] Yes, the names of the U.S. Government agency and the Government contract number are:

Respectfully submitted,

SIGNATURE _____ DATE 3/31/00

TYPED or PRINTED NAME Duane S. Kobayashi REGISTRATION NO. 41,122

[ ] Additional Inventors are being named on separately numbered sheets attached hereto.

PROVISIONAL APPLICATION FILING ONLY

41808 v1/RE
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033100/1258

SYSTEM AND METHOD FOR LOCAL META DATA INSERTION

Inventors: **Steve Reynolds**
Tom Lemmons
Ian Zenoni
Joel Hassell
Tom Huber

Brief Description of the Drawings

The foregoing and other features and advantages of the invention will be apparent from the following, more particular description of a preferred embodiment of the invention, as illustrated in the accompanying drawings.

FIG. 1 illustrates an embodiment of a meta data substitution system.

FIG. 2 illustrates a flowchart of a meta data substitution process.

Detailed Description of the Preferred Embodiments

A preferred embodiment of the invention is discussed in detail below. While specific implementations are discussed, it should be understood that this is done for illustration purposes only. A person skilled in the relevant art will recognize that other components and configurations may be used without departing from the spirit and scope of the invention.

New standards are making the delivery of Web-based and enhanced content alongside television a reality. The Advanced Television Enhancement Forum (ATVEF) is a cross-industry group formed to specify a single public standard for delivering interactive television experiences.

The initial results of the ongoing collaborative effort are set forth in the ATVEF specification v1.1 r26, which is incorporated herein by reference in its entirety. The ATVEF specification enables interactive television content to be authored using a variety of tools and deployed to a variety of television, set-top, and PC-based receivers.

The ATVEF specification furthers the convergence of personal computers and traditional television receivers. As predicted, consumers will eventually own only a single device that will have the widespread availability and ease-of-use of television, combined with the interactive power and flexibility of a PC. In summary, ATVEF defines the standards used to create enhanced content that can be delivered over a variety of media, including analog (NTSC) and digital (ATSC) television broadcasts, and a variety of networks, including terrestrial broadcast, cable, and satellite.

In addition to defining what ATVEF content looks like, the ATVEF specification also defines how the content is transported from the broadcaster to the receiver, and how the receiver is informed that it has enhancements available for the user to access. The display of enhanced TV content includes two primary steps: delivery of data resources (e.g. HTML pages) and display of named data resources synchronized by triggers. The capability of networks for one-way and/or two-way communication drives the definition of two models of transport: Transport A and Transport B.

In general, Transport A is for delivery of triggers by the forward path and the pulling of data by a required return path, while Transport B is for delivery of triggers and data by the forward path where the return path is optional.

More specifically, Transport A is defined for ATVEF receivers that maintain a connection (commonly called a back-channel or return path) to the Internet. Generally, this network connection is provided by a dial-up modem, or can be provided by any type of bi-directional access channel. Transport A is a method for delivering only triggers, without additional content. Because there is no content delivered with Transport A, all data must be obtained over the back-channel, using the URL(s) passed with the trigger as a pointer to the content. For example, using the URL(s) in the trigger, content can be pulled from the Internet via a dial-up network connection.

Transport B, on the other hand, provides for delivery of both ATVEF triggers and the associated content via a broadcast network. In this model, the broadcaster pushes content to a receiver, which stores the content in case the user chooses to view it. Transport B uses announcements that are sent over the network to associate triggers with content streams. Generally, an announcement describes a content stream and the trigger stream and may include information regarding bandwidth, storage requirements, and language (enhancements may be delivered in multiple languages). Since a Transport B receiver stores any content that will be displayed, the receiver uses announcement information to make content storage decisions. For example, if a content stream requires more storage space than a particular receiver has available, the receiver can elect to discard some older content, or it may elect not to store the announced content stream.

It should be noted that a single video program can contain both Transport A (e.g. broadcast data triggers) and Transport B (e.g. IP) simultaneously. This scenario is advantageous to target both IP-based receivers as well as receivers that can only receive broadcast data triggers.

Receivers can then choose to support only IP based trigger streams and ignore broadcast data triggers, to support broadcast data triggers in the absence of IP based triggers, or to support broadcast data triggers and IP based triggers simultaneously.

How ATVEF data is delivered over a particular network is called the binding. For ATVEF to provide interoperability between broadcast networks and receivers, it is important that each physical network have only one binding. Additionally, it is equally important that each binding provide a fully comprehensive definition of the interface between the broadcast network specification and the ATVEF specification.

ATVEF has defined bindings for delivering data over Internet protocol (IP) multicast as well as over National Television System Committee (NTSC). Because the transmission of IP is defined for virtually every type of television broadcast network, the binding to IP is considered the reference binding. With this reference binding, defining an ATVEF binding for a new network can be based upon a specification of how to run IP over that network.

To illustrate the binding mechanism, consider the binding of ATVEF to the NTSC video format. Here, the NTSC binding defines Transport A using an NTSC-specific method, wherein ATVEF triggers are broadcast in line 21 of the vertical blanking interval (VBI). Transport B, on the other hand, uses the IP reference binding for delivering IP datagrams over the other VBI lines.

As described, a specific network binding can be based on the IP reference binding. Using the IP reference binding, or a network-specific binding (e.g., NTSC), or a combination thereof, the AVTEF specification can be transported on every major video network standard, including

but not limited to PAL and SECAM (the European counterparts to NTSC), ATSC (digital terrestrial broadcast), cable, and satellite.

Having described the general framework of the ATVEF specification and transport, a description of the delivery of television enhancements is now provided. Television enhancements for Transport B (Transport A only includes triggers) are comprised of three related data sources: announcements (which can be delivered via the session announcement protocol (SAP)), content (which can be delivered via the unidirectional hypertext transfer protocol (UHTTP)), and triggers (which can be delivered via the trigger protocol over user datagram protocol (UDP)).

More specifically, announcements can be broadcast on a single well-known multicast address and port and have a time period for which they are valid. Announcements also indicate the multicast address and port number that the client can listen in on to receive the content and triggers. Details of the announcement and the announcement protocol are provided in section 3.1.1 of AVTEF v1.1 r26.

In general, when the client sees a new announcement on the known address and port, the client knows that there will be data available on the given content and trigger addresses. Triggers are mechanisms used to alert receivers to incoming content enhancements. Among other information, every trigger contains a standard URL that defines the location of the enhanced content. ATVEF content may be located locally (e.g., delivered over the broadcast network and cached to a disk) or it may reside on the Internet, another public network, or a private network. Triggers are described in greater detail in Section 1.1.5 of AVTEF v1.1 r26.

Clients may choose not to notify the user if they believe that they cannot display the enhancement, generally because the content referred to by the specified URL is not available. When an enhancement has either been confirmed by the user, or has been started automatically, the enhancement is displayed.

If a new enhancement is announced while an existing enhancement is being displayed, the client may present the user with the option to begin receiving that announcement data (content and triggers) or do so automatically. When the time period specified by the announcement is over, clients may automatically end the enhancement or allow the user to continue viewing the enhancement over potentially unrelated video.

With this framework of announcements and triggers, enhancement content can be delivered to a receiver for display alongside traditional television content. In accordance with the present invention, the announcements and triggers can also be used for the distribution of customized enhancement content to selected portions of an intended viewing market. Selective substitution of enhancement content (or meta data) is effected through the meta data substitution system 100 illustrated in FIG. 1.

Meta data substitution system 100 is generally operative to monitor the content of meta data received as part of a video data stream and determine whether the received meta data is allowed to be replaced. In a typical distribution scenario, the original set of meta data would be replaced with customized meta data relevant that is targeted to the market downstream of meta data substitution system 100. In one example application, the meta data can define a national advertising campaign (e.g., Ford car ad) that is associated with the content of the video data stream. This national advertising campaign would not be targeted to a particular metropolitan

area. Accordingly, a meta data substitution system 100 located at a local video distribution point could choose to replace all or part of the national Ford car ad with advertising that is targeted to the particular metropolitan area.

As can be appreciated, meta data substitution system 100 can be situated at any point downstream of the original point of video distribution. In various applications, meta data substitution system 100 can be situated at distribution points such as a regional television network, a local television network affiliate, a local cable head end, an internet service provider, etc. As can be further appreciated, meta data substitution system 100 can be situated at multiple distribution points in a single distribution channel, thereby creating a cascading substitution effect. In this scenario, the substituted enhancement content is increasingly tailored to the intended viewing audience. In an advertising context, the targeted nature of the enhancement content would be particularly compelling.

As illustrated in FIG. 1, meta data substitution system 100 includes meta data stripper module 132, meta data algorithms module 134, meta data inserter module 136, and local meta data database 140. Collectively meta data stripper module 132, meta data algorithms module 134, and meta data inserter module 136 represent a generic meta data substitution component 130.

The operation of meta data substitution component 130 is illustrated by the flowchart of FIG. 2. The meta data substitution process begins at step 202, where meta data stripper 132 receives a video data stream, including the corresponding meta data, on an incoming distribution channel 110. As described above, the video data and its corresponding meta data can be received in a variety of formats depending upon the particular type of network. In one example, the video

data is delivered in NTSC format with the meta data (i.e., announcements, packages, and triggers) being mapped to various lines of the VBI.

Upon receipt of the video data stream, meta data stripper module 132, at step 204, proceeds to extract the meta data from the video data stream. As would be appreciated, this extraction process is dependent upon the format of the received video data stream. As illustrated in FIG. 1, the extracted meta data is then forwarded to meta data algorithms module 134.

Meta data algorithms module 134 is generally operative, at step 206, to determine whether substitution of the extracted meta data should occur. This substitution determination process is based upon the permissibility as defined by the originator of the meta data content. This permissibility can be based upon the nature of the meta data as defined by the specification of the announcements and triggers.

In one embodiment, the substitution determination can be based upon the specification of new "tve" options to the "A" parameter for a Transport B announcement. These new "tve" options can be defined as shown by the following examples:

1. A=tve-localInsertLevel:x
2. A=tve-region:regionName
3. A=tve-id:x

In the first example, "x" is a priority level, "1" being the highest (can't overwrite) and "99" being the lowest (overwrite all the time). In this example, meta data algorithms module 134 compares the priority level in the extracted announcement to its own assigned priority value. If

the priority level in the extracted announcement is lower than its own priority level, then substitution of the announcement is permissible.

In the second example, the substitution determination is based upon the region in which the meta data algorithms module 134 operates. If the meta data algorithms module 134 is operating in the region named in the extracted announcement, then substitution is permissible.

In the third example, "x" is a unique ID. The value of the unique ID determines which meta data algorithms modules 134 are permitted to substitute for the extracted announcement. In one embodiment, this determination process is based on a table lookup that defines the set of IDs that are permitted to perform the substitution.

In an alternative embodiment, the substitution determination can be based upon the specification of new attribute options to the Transport A or Transport B triggers. These new attribute options can include the following attribute definitions: *localInsertLevel:int*, *region:string*, and *tveID:string*. Each of these new attribute options will dictate a similar substitution determination process as discussed above with respect to the newly defined "A" parameters for Transport B announcements.

It should be noted, that the examples discussed above for new "A" parameters for Transport B announcements and new attribute options for Transport A or Transport B triggers are not intended to be exhaustive. Additional options can be defined to address specific distribution scenarios that require localized customization of embedded meta data.

If meta data algorithms module 134 determines, at step 206, that meta data substitution is permissible, then the new meta data is retrieved, at step 208, from local meta data database 140. The substitute meta data is then forwarded, at step 210, to meta data inserter module 136. Meta

data inserter module 136 is generally operative to generate the video data stream that is to be output to a localized distribution channel 120. At step 214, meta data inserter module 136 inserts the meta data received from meta data algorithms module 134 into the video data stream. As can be appreciated, this insertion process is dependent upon the particular format of the video data stream.

Alternatively, if meta data algorithms module 134 determines, at step 206, that meta data substitution is not permissible, then the originally extracted meta data is forwarded, at step 212, to meta data inserter module 136. At step 214, meta data inserter module 136 then inserts the originally extracted meta data back into the video data stream. It should be noted that in one embodiment, the originally extracted meta data may still exist as part of the originally received video data stream. In this scenario, the originally extracted meta data need not be reinserted into the video data stream when the meta data has remained unchanged (i.e., no meta data substitution). Thus, meta data inserter 136 would be operative to simply forward the video data stream that was originally received by meta data stripper module 132 onto incoming distribution channel 110.

After the substitute meta data has been inserted into the video data stream, meta data inserter module 136 is operative to output the repackaged video data stream to the localized distribution channel 120 at step 214. The provision of a video data stream with substitute meta data effects a targeted content distribution strategy. Customized local content thereby replaces non-targeted generic content.

While the invention has been described in detail and with reference to specific embodiments thereof, it will be apparent to one skilled in the art that various changes and

modifications can be made therein without departing from the spirit and scope thereof. Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

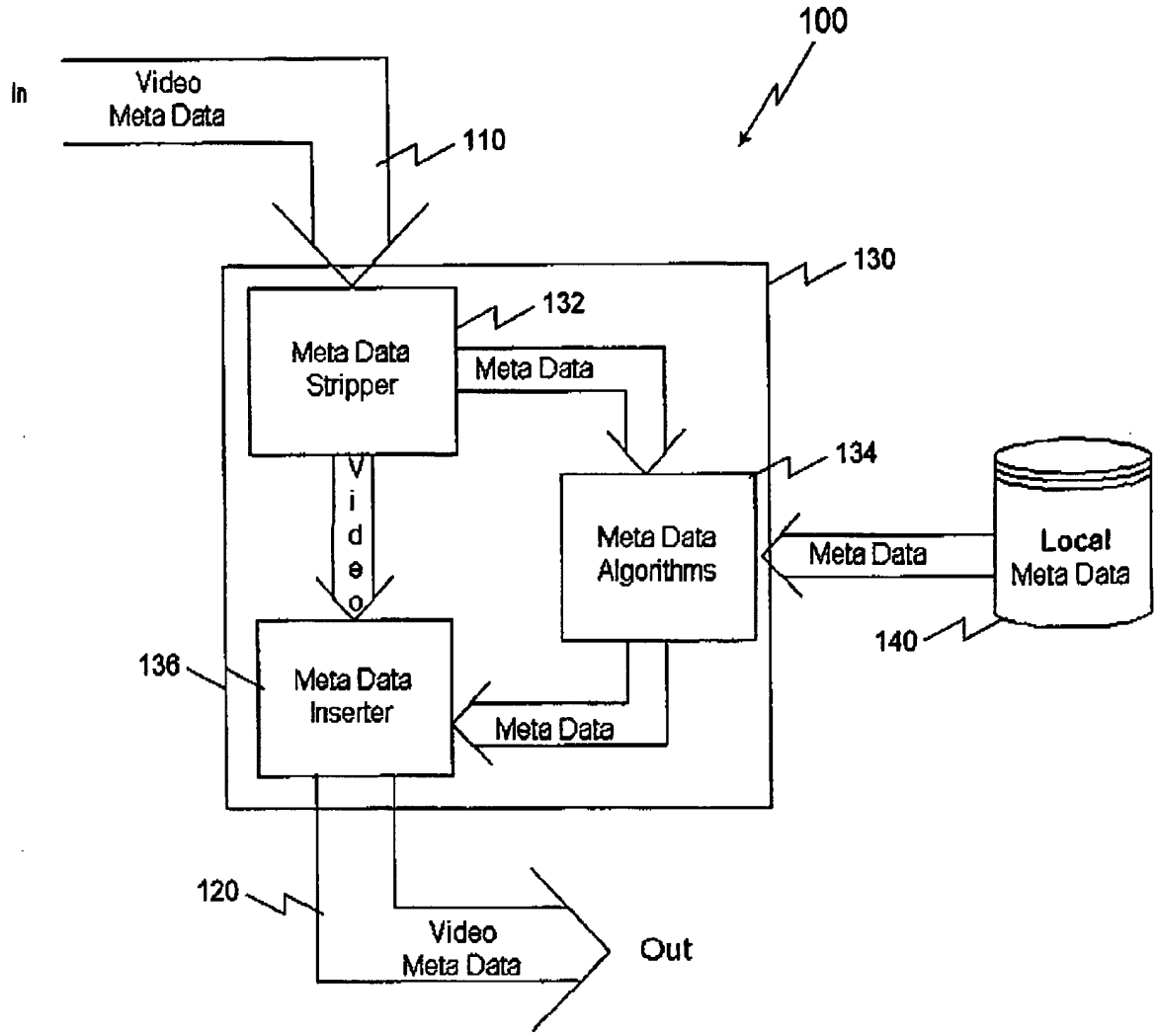
100
In
Video
Meta Data
110
130
132
Meta Data
Stripper
Meta Data
134
Video
Meta Data
Algorithms
Meta Data
Local
Meta Data
140
136
Meta Data
Inserter
Meta Data
120
Video
Meta Data
Out

FIG. 1

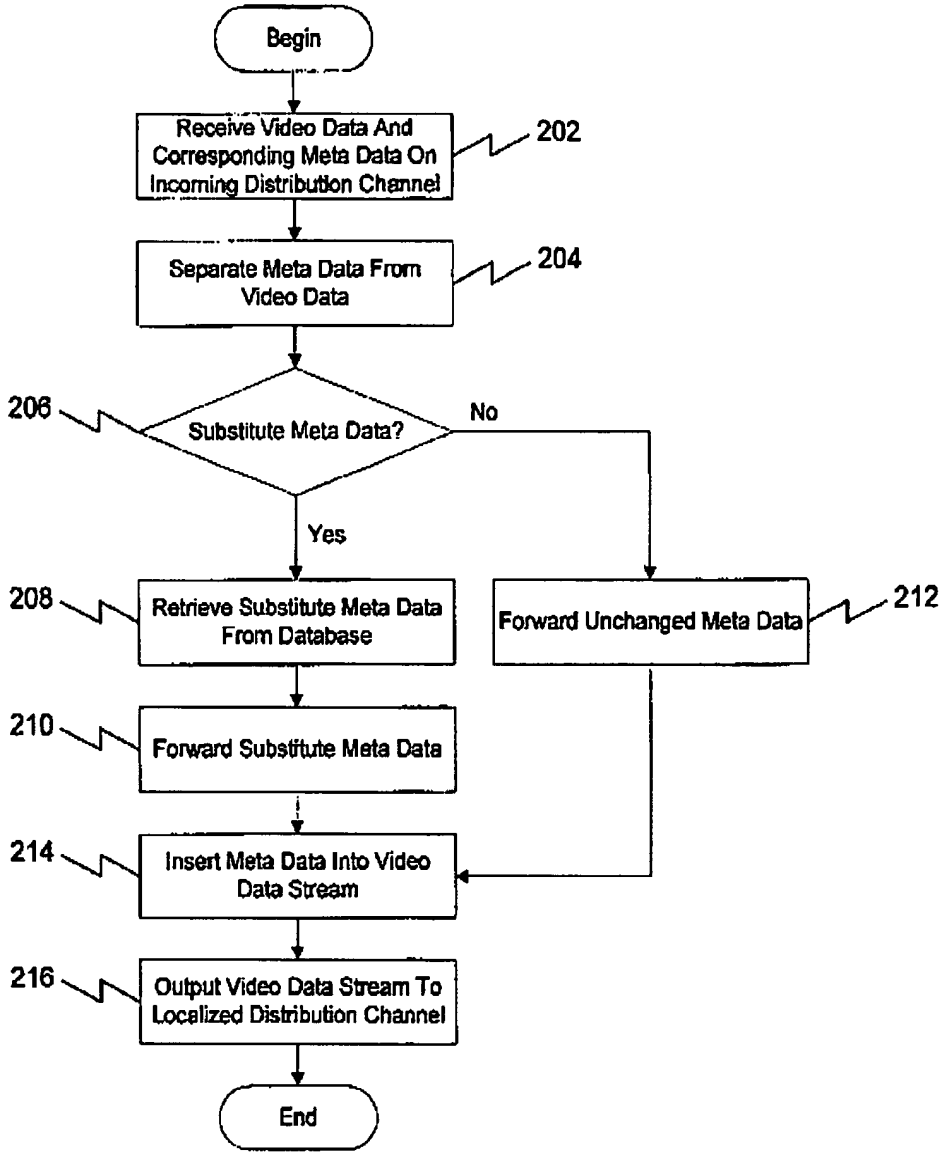

FIG. 2